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10/578,532	05/02/2006	Jian Zhao	USP3348C/SZ119-XCA	9484
7590 Raymond Y Chan 108 N Ynez Avenue Suite 128 Monterey Park, CA 91754			EXAMINER KARPINSKI, LUKE E	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/578,532

**Applicant(s)**

ZHAO ET AL.

**Examiner**

LUKE E. KARPINSKI

**Art Unit**

1616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claims***

Claims 1-13 are pending in this action.

Claims 1-5 have been withdrawn as being drawn to non-elected subject matter.

Claims 6-13 are under consideration in this action.

### ***Election/Restrictions***

Applicant's election without traverse of Inventive Group II (claims 6-13) and sodium zirconium phosphate for Species A, in the reply filed on 05/02/2008 is acknowledged. Upon further consideration, election of a specific solid carrier is no longer required and the species election requirement is withdrawn. Upon examining the instant claims and reading pertinent prior art all of the solid carriers disclosed by the applicant are seen to perform as functional equivalents for the purposes of the instant invention. The search for solid carriers will not be limited to sodium zirconium phosphate. The restriction requirement is still deemed proper and made final.

### ***Claim Objections***

Claim 7 is objected to because of the following informalities: It appears that silver, found in the last line of the claim, is misspelled. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 9-13 are rejected under 35 U.S.C. 112, second paragraph**, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 13 seems to be incomplete and it is not clear what is being claimed, nor can the scope of claim 13 be determined.

Claim 11 is unclear. Claim 11 recites "for washing a filter cake until a pH value ranged between 5-6, preferably 6, and for drying..." It is not clear if the pH value is in relation to the filter cake or to a solution containing said filter cake, or to the rinse of the filter cake. The claim is also unclear in general, there seems to be the end of a thought missing after the word preferably. For the purposes of performing a timely prosecution the claim will be examined to read "until the filter cake has a pH value from 5-6".

Regarding claims 9-12, a broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by

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such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 9 recites the broad recitation "1:6-10", and the claim also recites "preferably 1:8" which is the narrower statement of the range/limitation, claims 10 and 11 recite similar broad and narrow language for the pH value, temperatures and times, and claim 12 recites similar language for the temperature, time, and diameter.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Applicant Claims
2. Determining the scope and contents of the prior art.
3. Ascertaining the differences between the prior art and the claims at issue, and resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**1. Claims 6, 8, 9, and 11 are rejected under 35 U.S.C. 103(a)** as being unpatentable over US Patent No. 4,938,958 to Niira, deceased et al.

### ***Applicant Claims***

The applicant claims a method for preparing an antibacterial agent containing high-valence silver comprising the steps of: adding a solid carrier to a solution containing high-valence silver, stirring said solution to yield a solid compound, and filtering and drying said solid compound.

Further claimed by the applicant is a method for preparing said solution containing high-valence silver comprising dissolving silver peroxide into persulphate or nitric acid, several solid carriers, a solid carrier to silver solution volume ratio, ranges for the pH, time and temperature during the reaction of carrier and silver solution, and a calcinating step with ranges for the time temperature and particle size recovered.

***Determination of the Scope and Content of the Prior Art (MPEP §2141.01)***

Niira et al. teach methods for producing antibiotic zeolites (abstract), which reads on inorganic antibacterial agents, containing divalent silver ions (col. 2, lines 11-40), comprising the steps of: adding the zeolite to a solution containing silver ions (col. 2, lines 58-64), stirring said solution (col. 5, lines 54-56), and filtering and drying the solid composition (col. 5, lines 56-60) as claimed in claim 6.

Niira et al. further teach zeolite as a solid carrier (col. 2, lines 58-64) as claimed in claim 8, washing the reaction product and drying said product at 110°C, as pertaining to claim 11

***Ascertainment of the Difference between Scope the Prior Art and the Claims (MPEP §2141.012)***

Niira et al. do not teach a specific embodiment of the method as claimed in claim 6. However, Niira et al. do teach methods of producing antibiotic materials as well as the claimed steps.

Further Niira et al. do not teach the solid carrier to silver solution volume ratio as claimed in claim 9. However, Niira et al. do teach that the solid carrier is added to the silver solution. Niira et al. also do not teach the reaction product having a specific pH or a time period for drying said reaction product, as claimed in claim 11. However, Niira et al. do teach that the reaction product is washed until almost no ion remain and that the product is then dried.

***Finding of Prima Facie Obviousness Rational and Motivation***

***(MPEP §2142-2143)***

Regarding claim 6, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to perform the method of producing a silver antibiotic agent found from col. 2, line 58 to col. 3, line 61 of Niira et al. with the steps of stirring the solution and filtering the product, as taught by Niira et al. in the method found in col. 5, lines 43-61 in order to practice the method of instant claim 1.

One of ordinary skill in the art would have been motivated to combine these steps because both methods teach to making silver antibiotic agents through ion exchange and stirring liquid reactants and filtering solid products are basic chemistry techniques. Therefore it would have been obvious to utilize the stirring and filtering steps of one method, with the other method in order to promote ion exchange through stirring and easily collect the product by filtering the reaction mixture.

Regarding claim 9, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to utilize the claimed solid carrier to silver solution ratio in order to practice the method of claim 9.

One of ordinary skill in the art would have been motivated to utilize said ratio because the ratio is simply an amount of solid to add to a liquid, with no concentration requirements. The only requirement is that the solution is capable of being stirred after the addition. One of ordinary skill in the art would have known to add enough solid carrier to react with the amount of silver in the silver solution and to have the silver solution at a concentration dilute enough, that is comprising enough liquid, so that the addition of the solid carrier still rendered the solution capable of being stirred and fluid

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enough as to not hinder the ion exchange process. Therefore it would have been obvious to utilize the claimed ratio in order to promote ion exchange.

Regarding claim 11, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to wash the product material until a pH of 5-6 was reached and to dry said product material for 1-2 hours.

One of ordinary skill in the art would have been motivated to wash the product material until a pH of 5-6 was reached because Niira et al. teach that the product is washed until almost no ions remained, thus leaving only the product material. Since the product material of Niira et al. and the filter cake of the instant invention are the same the materials would necessarily have the same pH after filtering and washing said materials. The office does not have the facilities to test that both materials would have the same pH and it is therefore incumbent upon the applicant to show that the materials do have a different pH. Therefore it would have been obvious to wash the filter material till a pH of 5-6 is reached.

One of ordinary skill in the art would have been motivated to dry the product material for 1-2 hours because Niira et al. teach that the product material is "dried" and teaches a temperature within the claimed temperature range. The term "dried" is read as essentially all liquid being removed. Since the methods of Niira et al. are the same as in the instant invention and therefore all of the solutions and compounds are the same the drying process would necessarily take 1-2 hours. Further, one of ordinary skill in the art would have understood what the term dry means and be able to determine the appropriate amount of time to expose said product material to a temperature of 110

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degrees in order to dry said product. Therefore it would have been obvious to dry the product material for 1-2 hours.

From the teachings of the reference, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

**2. Claim 7 is rejected under 35 U.S.C. 103(a)** as being unpatentable over US Patent No. 4,938,958, to Niira et al. in view of US Patent No. 5,017,295 to Antelman.

### ***Applicant Claims***

Applicant claims the silver solution prepared by dissolving silver peroxide into persulfate or nitric acid.

### ***Determination of the Scope and Content of the Prior Art (MPEP §2141.01)***

The teachings of Niira et al. are delineated above. In particular Niira et al. teach bivalent silver (col.2, lines 16-18 and 39-40) and utilizing nitric acid to help dissolve the silver compounds (col. 5, line 47) as claimed in claim 7.

### ***Ascertainment of the Difference between Scope the Prior Art and the Claims (MPEP §2141.012)***

Niira et al. do not teach dissolving silver peroxide in persulphate as claimed in claim 7. This deficiency in Niira et al. is cured by Antelman. Antelman teaches making a divalent silver solution by dissolving silver(II)oxide, a synonym for silver peroxide, in various acids (col. 1, line(s) 61-63).

***Finding of Prima Facie Obviousness Rational and Motivation***  
***(MPEP §2142-2143)***

Regarding claim 7, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to combine the methods of producing silver antibiotic materials of Niira et al. with the step of producing a divalent silver solution, as taught by Antelman in order to produce the invention of instant claim 7.

One of ordinary skill in the art would have been motivated to do this because Niira et al. teach bivalent silver solutions and Antelman teaches a known method to produce bivalent silver solutions. Therefore it would have been obvious to utilize the bivalent silver solution production method, of Antelman, with the antibiotic material production of Niira et al. in order to utilize known methods of supplying a bivalent silver solution for the production of bivalent silver antibiotic materials.

From the teachings of the reference, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

**3. Claims 8, 10, and 12 are rejected under 35 U.S.C. 103(a)** as being unpatentable over US Patent No. 4,938,958 to Niira et al. in view of US Patent No. 5,441,717 to Ohsumi et al.

***Applicant Claims***

Applicant claims several solid carriers, ranges for the temperature, time, and pH during reaction, the utilization of NaOH to alter the pH, and a calcinating step.

***Determination of the Scope and Content of the Prior Art (MPEP §2141.01)***

The teachings of Niira et al. are delineated above. In particular Niira et al. teach zeolite as a carrier (abstract), as claimed in claim 8, and a temperature of 40°-60° (col. 5, line 54), a reaction time of 3-24 hours (col. 2, lines 67-68), and a pH value from 3-10 and 5-7 and that an acidic pH is important to prevent silver oxide from depositing on the carrier (col. 3, lines 1-4), as claimed in claim 10.

***Ascertainment of the Difference between Scope the Prior Art and the Claims (MPEP §2141.012)***

Niira et al. do not teach phosphates as claimed in claim 8. This deficiency in Niira et al. is cured by Ohsumi et al. Ohsumi et al. teach silver ion exchange with zeolites (col. 1, lines 50-53) and phosphates, including sodium zirconium phosphate (col. 3, line 52).

Further, Niira et al. do not teach altering the pH range with NaOH or KOH as claimed in claim 10. This deficiency is cured by Ohsumi et al. Ohsumi et al. teach that NaOH is utilized to alter the pH range a solution (col. 5, lines 30-31). Niira et al. also do not teach a pH range as acidic as claimed in claim 10, however, Niira et al. do teach that the pH range is preferably acid to prevent silver oxide deposition.

Niira et al. also do not teach a calcinating step. This deficiency in Niira et al. is cured by Ohsumi et al. Ohsumi et al. teach achieving chemical and physical stability by heating the product to 700-900 degrees for 1-20 hours (col. 6, line 52 to col. 7, line 5), as claimed in claim 12.

***Finding of Prima Facie Obviousness Rational and Motivation***  
***(MPEP §2142-2143)***

Regarding claim 8, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to practice the methods of Niira et al. with either a zeolite or phosphate as the solid carrier, as taught by Ohsumi et al. in order to practice the invention of instant claim 8.

One of ordinary skill in the art would have been motivated to utilize either material because Ohsumi et al. teach that they are functional equivalents as silver ion carriers. Therefore it would have been obvious to utilize the zeolite or the phosphate as taught by Ohsumi et al., with the methods of Niira et al. in order to utilize other carrier materials without changing the function of the product.

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Regarding claim 10, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the pH values of the methods of Niira et al. as taught by Niira et al. in order to prevent deposition of Silver oxide on the carrier.

One of ordinary skill in the art would have been motivated to modify the pH value of the solution to a more acidic value because Niira et al. teach that an acidic value is required to prevent silver oxide deposition. Therefore it would have been obvious to utilize a more acidic pH value as taught by Niira et al. in order to prevent silver oxide deposition on the carrier.

Regarding claim 10, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize NaOH in order to alter the pH value.

One of ordinary skill in the art would have been motivated to modify the pH value of the solution with NaOH because Ohsumi et al. teach that NaOH may be utilized to alter the pH value of a solution while practicing similar methods. Therefore it would have been obvious to utilize NaOH to alter the pH in order to remain within an optimum pH range.

From the teachings of the reference, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

**4. Claims 6-9 and 10-12 rejected under 35 U.S.C. 103(a)** as being unpatentable over US Patent No. 5,441,717 to Ohsumi et al. in view of US Patent No. 5,017,295 to Antelman.

***Applicant Claims***

The applicant claims a method for preparing an antibacterial agent containing high-valence silver comprising the steps of: adding a solid carrier to a solution containing high-valence silver, stirring said solution to yield a solid compound, and filtering and drying said solid compound.

Further claimed by the applicant is a method for preparing said solution containing high-valence silver comprising dissolving silver peroxide into persulphate or nitric acid, several solid carriers, a solid carrier to silver solution volume ratio, ranges for the time and temperature during the reaction of carrier and silver solution, and a calcinating step with ranges for the time temperature and particle size recovered.

***Determination of the Scope and Content of the Prior Art (MPEP §2141.01)***

Ohsumi et al. teach a method of preparing inorganic antibacterial compounds containing silver (abstract), adding a solid carrier, capable of ion exchange, to a solution containing silver, stirring said solution to form a solid, and filtering and drying said solid (col. 5, line 49 to col. 6, line 17), as claimed in claim 6.

Ohsumi et al. further teach dissolving a silver salt into nitric acid to prepare the silver solution (col. 7, lines 31-35) as pertaining to claim 7, sodium zirconium phosphate and zeolite as the solid carrier (col. 11, example 4, and col. 1, lines 50-53 respectively), as claimed in claim 8, washing and drying the solid product at 110 degrees (col. 5, line 49 to col. 6, line 17), as pertaining to claim 11, and firing said compound from 700-900 degrees (col. 6, line 53 to col. 7, line 5) and said product having a size range from 1-2 microns (col. 12, comparative example 3) as pertaining to claim 12.

***Ascertainment of the Difference between Scope the Prior Art and the Claims  
(MPEP §2141.012)***

Ohsumi et al. do not teach high valence silver as claimed in claim 1. This deficiency in Ohsumi et al. is cured by Antelman. Antelman teaches that divalent silver is more active as a bactericide than monovalent silver (abstract).

Further, Ohsumi et al. do not teach any production methods of bivalent silver compounds as claimed in claim 7. This deficiency is cured by Antelman. Antelman teaches that stable bivalent silver compounds can be produced by reacting a silver oxide (which reads on silver peroxide) with various acids (col. 1, lines 61-63).

***Finding of Prima Facie Obviousness Rational and Motivation  
(MPEP §2142-2143)***

Regarding claim 6, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to produce the antibacterial silver

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compounds of Ohsumi et al., with bivalent silver, as taught by Antelman in order to practice the invention of instant claim 6.

One of ordinary skill in the art would have been motivated to do this because Antelman teaches that bivalent silver is a better antibacterial agent than monovalent silver. Therefore it would have been obvious to utilize the bivalent silver of Antelman, with the antibacterial production methods of Ohsumi et al. in order to produce a more active antibacterial product.

Regarding claim 7, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to produce the antibacterial silver compounds of Ohsumi et al., by dissolving silver peroxide in an acid, as taught by Antelman in order to practice the invention of instant claim 7. It also would have been obvious to utilize nitric acid as taught by Ohsumi et al.

One of ordinary skill in the art would have been motivated to do this because Antelman teaches a known method for producing a solution with bivalent silver ions. Therefore it would have been obvious to utilize the bivalent silver ion solution production method of Antelman, with the antibacterial production methods of Ohsumi et al. in order to produce a more active antibacterial product.

Regarding claim 9, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to utilize the claimed solid carrier to silver solution ratio in order to practice the method of claim 9.

One of ordinary skill in the art would have been motivated to utilize said ratio because the ratio is simply an amount of solid to add to a liquid, with no concentration

requirements. The only requirement is that the solution is capable of being stirred after the addition. One of ordinary skill in the art would have known to add enough solid carrier to react with the amount of silver in the silver solution and to have the silver solution at a concentration dilute enough, that is comprising enough liquid, so that the addition of the solid carrier still rendered the solution capable of being stirred and fluid enough as to not hinder the ion exchange process. Therefore it would have been obvious to utilize the claimed ratio in order to promote ion exchange.

Regarding claim 11, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to wash the product material until a pH of 5-6 was reached and to dry said product material for 1-2 hours.

One of ordinary skill in the art would have been motivated to wash the product material until a pH of 5-6 was reached because Ohsumi et al. teach that the product is sufficiently washed. Since the product material of Ohsumi et al. and the filter cake of the instant invention are the same the materials would necessarily have the same pH after filtering and washing said materials. The office does not have the facilities to test that both materials would have the same pH and it is therefore incumbent upon the applicant to show that the materials do have a different pH. Therefore it would have been obvious to wash the filter material till a pH of 5-6 is reached.

One of ordinary skill in the art would have been motivated to dry the product material for 1-2 hours because Ohsumi et al. teach that the product material is dried for 12 hours at 110 degrees. The term "dried" is read as essentially all liquid being removed. One of ordinary skill in the art would have understood what the term dry

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means and be able to determine the appropriate amount of time to expose said product material to a temperature of 110 degrees in order to dry said product. Therefore it would have been obvious to dry the product material for 1-2 hours.

Regarding claim 12, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to grinding said product to a particle size of 1-2 microns.

One of ordinary skill in the art would have been motivated to grind the product to said size because Ohsumi et al. teach that the products can be in powder form and also teach a specific particle size between 1 and 2 microns for the zeolite example. Therefore it would have been obvious to grind any of the product examples down to a size of 1-2 microns in order to produce a powder with acceptable particle sizes.

From the teachings of the reference, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

***Conclusion***

Claims 1-5 have been withdrawn as being drawn to non-elected subject matter.

Claims 6-13 are rejected.

No claims are allowed.

***Inquiries***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LUKE E. KARPINSKI whose telephone number is (571)270-3501. The examiner can normally be reached on Monday Thursday 9-4 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann R. Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LEK

/Mina Haghighatian/  
Primary Examiner  
Art Unit 1616

